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Dkt. 58434-A/JPW/SHS

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicants: B. Jack Longley

Serial No.: 09/474,478

Filed : December 29, 1999

For : METHODS FOR INHIBITING CUTANEOUS INFLAMMATION AND HYPERPIGMENTATION

1185 Avenue of the Americas
New York, New York 10036
April 19, 2000

Assistant Commissioner for Patents
Washington, D.C. 20231

Sir:

INFORMATION DISCLOSURE STATEMENT

In accordance with their duty of disclosure under 37 C.F.R. §1.56, applicants direct the Examiner's attention to the following references which are listed on the PTO-1449 form attached hereto as **Exhibit A.** Copies of references 24-51 are attached hereto as **Exhibits 1-28** respectively.

1. Anderson, D.M., et al. (1990) "Molecular cloning of mast cell growth factor, a hematopoietin that is active in both membrane bound and soluble forms" Cell, 63:235-243;

2. Bradl, M., et al. (1991) "Clonal coat color variation due to a transforming gene expressed in melanocytes of transgenic mice" Proc. Nat. Acad. Sci. USA 88:6447-6451;

3. Costa, J. J. et al. (1996) "Recombinant human stem cell factor (KIT ligand) promotes human mast cell and melanocyte hyperplasia and functional activation in vivo" J. Exp. Med 183: 2681-2686;

4. Funasaka, Y., et al. (1992) "C-kit-kinasse induces a cascade

of protein tyrosine phosphorylation in normal human melanocytes in respnse to mast cell growth factor and stimulates mitogen-activated protein kinase but is down-regulated in melanomas" Mol. Biol. Cell, 3:197-209;

5. Furitsu, T., et al. (1993) "Identification of mutations in the coding sequence of the proto-oncogene c-kit in human mast cell leuemia cell line causing ligand independent activation of c-KIT product J. Clin. Invest., 92:1736-1744;

6. Grichnik, J. M., et al. (1995) "Human recombinant stem-cell factor induces melanocytic hyperplasia in susceptible patients" J. Am. Acad. Dermol., 33: 577-583;

7. Hamann, K., et al. (1995) "Expression of stem cell factor in cutaneous mastocytosis" Br. J Dermatol., 133: 203-208;

8. Harrist, T.J., et al. (1995) Recombinant human stem cell factor in (SCF) (c-kit ligand promotes melanocytes hyperplasia and activation in vivo" Lab. Invest., 72:48A;

9. Hirobe, T. (1984) "Histochemical survey of the distribution of the epidermal melanoblasts and melanocytes in the mouse during fetal and postnatal periods" Anat. Rec., 208:589-594;

10. Longley, B. J. et al. (1993) "Altered metabolism of mast-cell growth factor (c-kit ligand) in cutaneous mastocytosis" N. Engl. J. Med. 328:1302-1307;

11. Longley, B. J. et al. (1995) "The mast cell and mast cell disease" J. Am. Acad. Dermatol., 32:545-561;

12. Longley, B. J., et al. (1996) "Somastic c-KIT activating mutation in urticaria pigmentosa and aggressive mastocytosis: establisment of clonality in a human mast

cell neoplasm" Nature Genetics, 12:312-314;

13. Lu, H. S., et al. (1991) "Amino acid sequence and post-translational modification of stem cell factor isolated from buffalo rat liver cell-conditioned medium" J. Biol. Chem., 266:8102-8107;

14. Nishikawa, S., et al. (1991) "In utero manipulation of coat color formation by a monoclonal anti-c-kit antibody: two distinct waves of c-kit-dependency during melanocyte development" EMBO J. 10:2111-2118;

15. Okura, M., et al. (1995) "Effects of monoclonal anti-c-kit antibody (AKC2) on melanocytes in newborn mice" J. Invest. Dermatol., 105:322-328;

16. Tsai, M., et al. (1991) "The rat c-kit ligand, stem cell factor, induces the development of connective tissue-type and mucosal mast cells in vivo: analysis by anatomical distribution, hisochemistry, and protease phenotype" J. Exp. Med., 174:125-131;

17. Vassar, R., et al. (1989) "Tissue-specific and differentiation-specific expression of a human K14 keratin gene in transgenic mice" Proc. Natl. Acad. Sci. USA, 86:1563-1567;

18. Weiss, R. R. et al. (1995) "Human dermal endothelial cells express membrane-associated mast cell growth factor" J. Invest. Dermatol. 104:101-106;

19. Williams, D.E., et al. (1990) "Identification of a ligand for the c-kit proto-oncogene" Cell, 1990;63:167-174;

20. Yarden, Y., et al. (1987) "Human proto-oncogene c-kit: a new

cell surface receptor tyrosine kinase for an unidentified ligand" EMBO J. 6:3341-3351;

21. Yoshida, H., et al. (1996) "Distinct stages of melanocyte differentiation revealed by analysis of nonuniform pigmentation patterns" Development, 122:1207-1214;

22. Yohida, H. et al. (1996) "Neural and skin cell- specific expression pattern conferred by Steel factor regulatory sequence in transgenic mice" Development Dynamic, 207:222-232;

23. Zsebo, K. M., et al. (1990) "Stem cell factor is encoded at the S1 locus of the mouse and is the ligand for the c-kit tyrosine kinase receptor" Cell, 63:213-224;

24. Ando A, Martin TR, Galli SJ. J. Clin. Invest. 1993, 92:1639-49. **(Exhibit 1)**;

25. Bischoff SC and Dahinden CA. J. Exp. Med. 1992, 175:237-44. **(Exhibit 2)**;

26. Coleman JW, Holliday MR, Kimber I, Zsebo KM and Galli SJ. J. Immunol. 1993, 150: 556-62. **(Exhibit 3)**;

27. Columbo M , Horowitz EM, Botana LM, MacGlashan DW Jr., Bochner BS, Gillis S, Zsebo KM, Galli SJ, Lichtenstein LM. J. Immunol. 1992, 149:599-608. **(Exhibit 4)**;

28. Furitsu T, Tsujimura T, Tono T, Ikeda H, Kitayama H, *et al*: Identification of mutations in the coding sequence of the proto-oncogene *c-kit* in a human mast cell leukemia cell line causing ligand-independent activation of *c-kit* product. *J Clin Invest* 92: 1736-1744, 1993. **(Exhibit 5)**;

29. Hirota S, Isozaki K, Moriyama Y, Hashimoto K, Nishida T, *et al*: Gain-of-function mutations of c-*kit* in human gastrointestinal stromal tumors. *Science* 279: 577-580, 1998. **(Exhibit 6)**;

30. Kitayama H, Kanakura Y, Furitsu T, Tsujimura T, Oritani K, *et al*: Constitutively activating mutations of c-*kit* receptor tyrosine kinase confer factor-independent growth and tumorigenicity of factor-dependent hematopoietic cell lines. *Blood* 85: 790-798, 1995. **(Exhibit 7)**;

31. Longley BJ, Metcalfe DD, Tharp M, Wang X, Tyrrell L, *et al*: Activating and dominant inactivating *c-KIT* catalytic domain mutations in distinct clinical forms of human mastocytosis. *Proc Natl Acad Sci USA* 96: 1609-1614, 1999. **(Exhibit 8)**;

32. Longley BJ, Tyrrell L, Lu S, Ma Y, Langley K, *et al*: Somatic c-*KIT* activating mutation in urticaria pigmentosa and aggressive mastocytosis: establishment of clonality in a human mast cell neoplasm. *Nature Genet* 12: 312-314, 1996.**(Exhibit 9)**;

33. Ma Y, Cunningham ME, Wang X, Ghosh I, Regan L, Longley BJ: Inhibition of spontaneous receptor phosphorylation by residues in a putative α-helix in the KIT intracellular juxtamembrane region. *J Biol Chem* 274: 13399-13402, 1999b. **(Exhibit 10)**;

34. Ma Y, Longley BJ, Wang X, Blount JL, Langley K, Caughey GH: Clustering of activating mutations in c-*KIT*'s juxtamembrane coding region in canine mast cell neoplasms. *J Invest*

Dermatol 112: 165-170, 1999a. **(Exhibit 11)**;

35. Nagata H, Worobec AS, Oh CK, Chowdhury BA, Tannenbaum S, *et al*: Identification of a point mutation in the catalytic domain of the protooncogene *c-kit* in peripheral blood mononuclear cells of patients who have mastocytosis with an associated hematologic disorder. *Proc Natl Acad Sci USA* 92: 10560-10564, 1995. **(Exhibit 12)**;

36. Nakajima K, Hirai K, Yamaguchi M, Takaishi T, Ohta K, Morita Y, Ito K. Biochem. Biophys. Res. Commun. 1992, 183:1076-83. **(Exhibit 13)**;

37. Tsujimura T, Morimoto M, Hashimoto K, Moriyama Y, Kitayama H, *et al*: Constitutive activation of *c-kit* in FMA3 murine mastocytoma cells caused by deletion of seven amino acids at the juxtamembrane domain. *Blood* 87: 273-283, 1996 **(Exhibit 14)**;

38. Wershil BK, Tsai M, Geissler EN, Zsebo KM, Galli SJ. J. Exp. Med. 1992, 175:245-55. **(Exhibit 15)**;

39. Yarden Y, Kuang W-J, Yang-Feng T, Coussens L, Munemitsu S, *et al*: Human proto-oncogene *c-kit*: a new cell surface receptor tyrosine kinase for an unidentified ligand. *EMBO J* 6: 3341-3351, 1987. **(Exhibit 16)**;

40. Devinney R, Gold WV: Establishment of two dog mastocytoma cell lines in continuous culture. *Am J Respir Cell Mol Biol* 3: 413-420, 1990 **(Exhibit 17)**;

41. Dunn TB, Potter M: A transplantable mast-cell neoplasm in the mouse. *J Natl Cancer Inst* 18: 587-601, 1957 **(Exhibit 18)**;

42. Lazarus SC, DeVinney R, McCabe LJ, Finkbeiner WE, Elias DJ, Gold WM: Isolated canine , 1986 mastocytoma cells: propagation and characterization of two cell lines. *Am J Physiol* 251: C935-944 **(Exhibit 19)**;

43. Martin FH, Suggs SV, Langley KE, Lu HS, Ting J, *et al*: Primary structure and functional expression of rat and human stem cell factor DNAs. *Cell* 63: 203-211, 1990 **(Exhibit 20)**;

44. Mohammadi M, McMahon G, Sun L, Tang C, Hirth P, *et al*: Structures of the tyrosine kinase domain of fibroblast growth factor receptor in complex with inhibitors. *Science* 276: 955-960, 1997 **(Exhibit 21)**;

45. Piao X, Paulson R, Van Der Geer P, Pawson T, Berstein A: Oncogenic mutation in the Kit receptor tyrosine kinase alters substrate specificity and induces degradation of the protein tyrosine phosphatase SHP-1. *Proc Natl Acad Sci USA* 93: 14665-14669, 1996 **(Exhibit 22)**;

46. Qiu F, Ray P, Brown K, Barker PE, Jhanwar S, *et al*: Primary structure of c-*kit*: relationship with the CSF-1/PDGF receptor kinase family-oncogenic activation of v-*kit* involves deletion of extracellular domain and C terminus. *EMBO J* 7: 1003-1011, 1988 **(Exhibit 23)**;

47. Sun L, Tran N, Tang F, App H, Hirth P, McMahon G, Tang C: Synthesis and biological evaluations of 3-substituted indolin-2-ones: a novel class of tyrosine kinase inhibitors that exhibit selectivity toward particular receptor tyrosine kinases. *J Med Chem* 41: 2588-2603, 1998 **(Exhibit 24)**;

48. Tsujimura T, Furitsu T, Morimoto M, Koji K, Nomura S, *et al*: Ligand-independent activation of *c-kit* receptor tyrosine kinase in a murine mastocytoma cell line P-815 generated by a point mutation. *Blood* 83: 2619-2626, 1994 **(Exhibit 25)**;

49. Schrader, John W. and Thomas, Wayne R. "Delayed Hypersensitivity in Mast-Cell-Deficient Mice", The Journal of Immunology. (1983), vol. 130, No. 6, pp. 2565-2567 **(Exhibit 26)**;

50. Galli, Stephen J. and Mekori, Yoseph A., "Undiminished Immunologic Tolerance to Contact Sensitivity in Mast Cell-Deficient W/Wv and S1/S1d Mice1", The Journal of Immunology. (1995), vol. 135, No.2, pp. 879-885 **(Exhibit 27)**; and

51. Askenase, Philip W., Loveren, Henk Van, Kraeuter-Kops, Sandra, Ron, Yacov, Meade, Robin, Theoharides, Theoharis C., Nordlund, James J., Scovern, Henry, Gerhson, Michael D., and Ptak, Wlodzimierz., "Defective Elicitation of Delayed-Type Hypersensitivity in W/Wv and SI/SId Mast Cell-Deficient Mice1", The Journal of Immunology. (1983), vol. 131, No. 6, pp. 2687-2693 **(Exhibit 28)**.

The subject application is a continuation-in-part of and claims the benefit under 35 U.S.C. §120 of U.S. Serial No. 09/306,143, filed May 6, 1999. Since references 1-23 were provided to the United States Patent and Trademark Office in a Information Disclosure Statement filed on October 8, 1999 in connection with U.S. Serial No. 09/306,143, under 37 C.F.R. §1.9(d), copies of these references are not being provided herewith.

If a telephone interview would be of assistance in advancing prosecution of the subject application, applicants' undersigned attorney invites the Examiner to telephone at the number provided below.

Pursuant to 37 C.F.R. §1.97(b)(3), no fee is deemed necessary in connection with the filing of this Information Disclosure Statement. However, if any fee is required authorization is hereby given to charge the amount of any such fee to Deposit Account No. 03-3125.

Respectfully submitted,

I hereby certify that this correspondence is being deposited this date with the U.S. Postal Service with sufficient postage as first class mail in an envelope addressed to: Assistant Commissioner for Patents, Washington, D.C. 20231.

4/19/00

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Date

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Form PTO-1449	U.S. Department of Commerce Patent and Trademark Office	Atty. Docket No. 58434-A/JPW/SHS	Serial No. 09/474,478
		Applicant: B. Jack Longley	
	INFORMATION DISCLOSURE CITATION (Use several sheets if necessary)	Filing Date December 29, 1999	Group Art Unit 1623

U.S. PATENT DOCUMENTS

Examiner Initial		Document Number	Date	Name	Class	Subclass	Filing Date if Appropriate

FOREIGN PATENT DOCUMENTS

		Document Number	Date	Country	Class	Subclass	Translation Yes	Translation No

OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)

RG		Anderson, D.M., et al. (1990) "Molecular cloning of mast cell growth factor, a hematopoietin that is active in both membrane bound and soluble forms" Cell, 63:235-243
		Bradl, M., et al. (1991) "Clonal coat color variation due to a transforming gene expressed in melanocytes of transgenic mice" Proc. Nat. Acad. Sci. USA 88:6447-6451;
		Costa, J. J. et al. (1996) "Recombinant human stem cell factor (KIT ligand) promotes human mast cell and melanocyte hyperplasia and functional activation in vivo" J. Exp. Med 183: 2681-2686;
		Funasaka, Y., et al. (1992) "C-kit-kinasse induces a cascade of protein tyrosine phosphorylation in normal human melanocytes in respnse to mast cell growth factor and stimulates mitogen-activated protein kinase but is down-regulated in melanomas" Mol. Biol. Cell, 3:197-209;
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V		Hamann, K., et al. (1995) "Expression of stem cell factor in cutaneous mastocytosis" Br. J.Dermatol., 133: 203-208;

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NG		Harrist, T.J., et al. (1995) Recombinant human stem cell factor in (SCF) (c-kit ligand promotes melanocytes hyperplasia and activation in vivo" Lab. Invest., 72:48A;
		Hirobe, T. (1984) "Histochemical survey of the distribution of the epidermal melanoblasts and melanocytes in the mouse during fetal and postnatal periods" Anat. Rec., 208:589-594;
		Longley, B. J. et al. (1993) "Altered metabolism of mast-cell growth factor (c-kit ligand) in cutaneous mastocytosis" N. Engl. J. Med. . 328:1302-1307;
		Longley, B. J. et al. (1995) "The mast cell and mast cell disease" J. Am. Acad. Dermatol., 32:545-561;
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		Nishikawa, S., et al. (1991) "In utero manipulation of coat color formation by a monoclonal anti-c-kit antibody: two distinct waves of c-kit-dependency during melanocyte development" EMBO J.10:2111-2118;

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		Tsai, M., et al. (1991) "The rat c-kit ligand, stem cell factor, induces the development of connective tissue-type and mucosal mast cells in vivo: analysis by anatomical distribution, hisochemistry, and protease phenotype" J. Exp. Med., 174:125-131;
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		Weiss, R. R. et al. (1995) "Human dermal endothelial cells express membrane-associated mast cell growth factor" J. Invest. Dermatol. 104:101-106;
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		Ando A, Martin TR, Galli SJ. J. Clin. Invest. 1993, 92:1639-49. **(Exhibit 1)**
		Bischoff SC and Dahinden CA. J. Exp. Med. 1992, 175:237-44. **(Exhibit 2)**
		Coleman JW, Holliday MR, Kimber I, Zsebo KM and Galli SJ. J. Immunol. 1993, 150: 556-62. **(Exhibit 3)**
		Columbo M , Horowitz EM, Botana LM, MacGlashan DW Jr., Bochner BS, Gillis S, Zsebo KM, Galli SJ, Lichtenstein LM. J. Immunol. 1992, 149:599-608. **(Exhibit 4)**
✓		Furitsu T, Tsujimura T, Tono T, Ikeda H, Kitayama H, *et al*: Identification of mutations in the coding sequence of the proto-oncogene *c-kit* in a human mast cell leukemia cell line causing ligand-independent activation of *c-kit* product. *J Clin Invest* 92: 1736-1744, 1993. **(Exhibit 5)**

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		Kitayama H, Kanakura Y, Furitsu T, Tsujimura T, Oritani K, *et al*: Constitutively activating mutations of c-*kit* receptor tyrosine kinase confer factor-independent growth and tumorigenicity of factor-dependent hematopoietic cell lines. *Blood* 85: 790-798, 1995. **(Exhibit 7)**
		Longley BJ, Metcalfe DD, Tharp M, Wang X, Tyrrell L, *et al*: Activating and dominant inactivating *c-KIT* catalytic domain mutations in distinct clinical forms of human mastocytosis. *Proc Natl Acad Sci USA* 96: 1609-1614, 1999. **(Exhibit 8)**
		Longley BJ, Tyrrell L, Lu S, Ma Y, Langley K, *et al*: Somatic c-*KIT* activating mutation in urticaria pigmentosa and aggressive mastocytosis: establishment of clonality in a human mast cell neoplasm. *Nature Genet* 12: 312-314, 1996.**(Exhibit 9)**
		Ma Y, Cunningham ME, Wang X, Ghosh I, Regan L, Longley BJ: Inhibition of spontaneous receptor phosphorylation by residues in a putative α-helix in the KIT intracellular juxtamembrane region. *J Biol Chem* 274: 13399-13402, 1999b. **(Exhibit 10)**
		Ma Y, Longley BJ, Wang X, Blount JL, Langley K, Caughey GH: Clustering of activating mutations in c-*KIT*'s juxtamembrane coding region in canine mast cell neoplasms. *J Invest Dermatol* 112: 165-170, 1999a. **(Exhibit 11)**

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		Wershil BK, Tsai M, Geissler EN, Zsebo KM, Galli SJ. J. Exp. Med. 1992, 175:245-55.**(Exhibit 15)**
		Yarden Y, Kuang W-J, Yang-Feng T, Coussens L, Munemitsu S, *et al*: Human proto-oncogene *c-kit*: a new cell surface receptor tyrosine kinase for an unidentified ligand. *EMBO J* 6: 3341-335 1987. **(Exhibit 16)**
L		Devinney R, Gold WV: Establishment of two dog mastocytoma cell lines in continuous culture. *Am J Respir Cell Mol Biol* 3: 413-420, 1990 **(Exhibit 17)**

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		Lazarus SC, DeVinney R, McCabe LJ, Finkbeiner WE, Elias DJ, Gold WM: Isolated canine mastocytoma cells: propagation and characterization of two cell lines. *Am J Physiol* 251: C935-944, 1986 **(Exhibit 19)**
		Martin FH, Suggs SV, Langley KE, Lu HS, Ting J, *et al*: Primary structure and functional expression of rat and human stem cell factor DNAs. *Cell* 63: 203-211, 1990 **(Exhibit 20)**
		Mohammadi M, McMahon G, Sun L, Tang C, Hirth P, *et al*: Structures of the tyrosine kinase domain of fibroblast growth factor receptor in complex with inhibitors. *Science* 276: 955-960, 1997 **(Exhibit 21)**
		Piao X, Paulson R, Van Der Geer P, Pawson T, Berstein A: Oncogenic mutation in the Kit receptor tyrosine kinase alters substrate specificity and induces degradation of the protein tyrosine phosphatase SHP-1. *Proc Natl Acad Sci USA* 93: 14665-14669, 1996 **(Exhibit 22)**
		Qiu F, Ray P, Brown K, Barker PE, Jhanwar S, *et al*: Primary structure of c-*kit*: relationship with the CSF-1/PDGF receptor kinase family-oncogenic activation of v-*kit* involves deletion of extracellular domain and C terminus. *EMBO J* 7: 1003-1011, 1988 **(Exhibit 23)**

EXAMINER	DATE CONSIDERED
R Goldman	2/16/01

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FOREIGN PATENT DOCUMENTS

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OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)

RG		Sun L, Tran N, Tang F, App H, Hirth P, McMahon G, Tang C: Synthesis and biological evaluations of 3-substituted indolin-2-ones: a novel class of tyrosine kinase inhibitors that exhibit selectivity toward particular receptor tyrosine kinases. *J Med Chem* 41: 2588-2603, 1998 **(Exhibit 24)**
		Tsujimura T, Furitsu T, Morimoto M, Koji K, Nomura S, *et al*: Ligand-independent activation of *c-kit* receptor tyrosine kinase in a murine mastocytoma cell line P-815 generated by a point mutation. *Blood* 83: 2619-2626, 1994 **(Exhibit 25)**
		Schrader, John W. and Thomas, Wayne R. "Delayed Hypersensitivity in Mast-Cell-Deficient Mice", The Journal of Immunology. (1983), vol. 130, No. 6, pp. 2565-2567 **(Exhibit 26)**
		Galli, Stephen J. and Mekori, Yoseph A., "Undiminished Immunologic Tolerance to Contact Sensitivity in Mast Cell-Deficient W/Wv and S1/S1d Mice1", The Journal of Immunology. (1995), vol. 135, No.2, pp. 879-885 **(Exhibit 27)**
		Askenase, Philip, et al., "Defective Elicitation of Delayed-Type Hypersensitivity in W/Wv and SI/SId Mast Cell-Deficient Mice1", The Journal of Immunology. (1983), vol. 131, No. 6, pp. 2687-2693 **(Exhibit 28)**

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